Responding to A Biological or Chemical Threat:

A Practical Guide

United States Department of State
Bureau of Diplomatic Security

This pamphlet provides a broad over view of the chemical and biological terrorist threat and, drawing on the lessons learned from the few chemical and biological incidents to date, suggests some basic means of detection, defense, and decontamination. The intention is not to alarm people but to enable employees and their family members to recognize and properly react to a chemical or biological situation in the even they encounter one.

In 1995, the Aum Shinrikyo, a Japanese religious cult, launched a large-scale chemical attack on the Tokyo subway system. The attack focused on four stations using Sarin gas, a potent chemical warfare nerve agent. Twelve people were killed but the attack fell far short of the apparent objective to inflict thousands of casualties. Subsequent investigation by authorities revealed that the cult had previously conducted several unsuccessful attacks against a variety of targets using other chemical agents and the biological agents botulism toxin and anthrax.

Since 1997, religious organizations, health clinics, and Government agencies in Indiana, Kentucky, Tennessee, California, Hawaii, and the District of Columbia, among other states, have received threatening letters purporting to contain the biological agent anthrax. While none of the letters were found to contain anthrax, they caused considerable fear and disruption where received.

Disturbing as they are, these incidents serve to illustrate a potentially new type of terrorist threat of concern to law enforcement and emergency planning officials throughout the U.S. Government. The State Department and its Diplomatic Security Service share that concern and have taken, and will continue to take, appropriate steps to meet the potential consequences of this threat.

If you or your family members require additional details about this or any security-related subject, please contact the regional security officer (RSO) at your post of assignment.

Aside from their common lethality, there is no "one size fits all" when it comes to describing the types and effects of possible chemical or biological agents. Chemical agents are generally liquids, often aerosolized, and most have immediate effects or are delayed for a few hours. Many chemical agents have a unique odor and color. Biological agents differ in that the effects are delayed, often for days. The effects of toxins, such as botulinum toxin, occur typically in less than a day. Living biological agents, such as anthrax or plague, generally take 2–5 days for symptoms to appear. Biological agents have no odor or color and can be in either liquid or powder form. There are many different potential chemical and biological agents that a terrorist could use as a weapon, but we can make the following broad generalizations:

- Although food or water contamination or absorption through the skin are possible attack routes, most experts agree that inhalation of chemical or biological agents is the most likely and effective means. Protection of breathing airways is therefore the single most important factor in a situation where chemical or biological agents may be present.
- Many likely agents are heavier than air and would tend to stay close to the ground. This dictates an upward safehaven strategy.
- Basic decontamination procedures are generally the same no matter what the agent. Thorough scrubbing with large amounts of warm soapy water or a mixture of 10 parts water to 1 part bleach (10:1) will greatly reduce the possibility of absorbing an agent through the skin.
- If water is not available, talcum powder or flour are also excellent means of decontamination of liquid agents. Sprinkle the flour or powder liberally over the affected skin area, wait 30 seconds, and brush off with a rag or gauze pad. (Note: The powder absorbs the agent so it must be brushed off thoroughly. If available, rubber gloves should be used when carrying out this procedure.)
- Generally, chemical agents tend to present an immediately noticeable effect, whereas many biological agents will take days before symptoms appear. In either case, medical attention should be sought immediately, even if exposure is thought to be limited.
- Most chemical and biological agents that present an inhalation hazard will break down fairly rapidly when exposed to the sun, diluted with water, or dissipated in high winds.
- No matter what the agent or its concentration, evacuation from the area of attack is always advisable unless you are properly equipped with an appropriate breathing device and protective clothing or have access to collective protection.

Warning Signs of An Attack or Incident

A chemical or biological attack or incident won't always be immediately apparent given the fact that many agents are odorless and colorless and some cause no immediately noticeable effects or symptoms. Be alert to the possible presence of agent. Indicators of such an attack include:

- Droplets of oily film on surfaces
- Unusual dead or dying animals in the area

- Unusual liquid sprays or vapors
- Unexplained odors (smell of bitter almonds, peach kernels, newly mown hay, or green grass)
- Unusual or unauthorized spraying in the area
- Victims displaying symptoms of nausea, difficulty breathing, convulsions, disorientation, or patterns of illness inconsistent with natural disease
- Low-lying clouds or fog unrelated to weather; clouds of dust; or suspended, possibly colored, particles
- People dressed unusually (long-sleeved shirts or overcoats in the summertime) or wearing breathing protection particularly in areas where large numbers of people tend to congregate, such as subways or stadiums

What To Do In Case of Attack

Protection of breathing airways is the single most important thing a person can do in the event of a chemical or biological incident or attack. In most cases, absent a handy gas mask, the only sure way to protect an airway is to put distance between you and the source of the agent. While evacuating the area, cover your mouth and nose with a handkerchief, coat sleeve, or any piece of cloth to provide some moderate means of protection. Other basic steps one can take to avoid or mitigate exposure to chemical or biological agents include:

- Stay alert for attack warning signs. Early detection enhances survival.
- Move upwind from the source of the attack.
- If evacuation from the immediate area is impossible, move indoors (if outside) and upward to an interior room on a higher floor. Remember many agents are heavier than air and will tend to stay close to the ground.
- Once indoors, close all windows and exterior doors and shut down air conditioning or heating systems to prevent circulation of air.
- Cover your mouth and nose. If gas masks are not available, use a surgical mask or a handkerchief. An improvised mask can be made by soaking a clean cloth in a solution of 1 tablespoon of baking soda in a cup of water. While this is not highly effective, it may provide some protection. Cover bare arms and legs and make sure any cuts or abrasions are covered or bandaged.
- If splashed with an agent, immediately wash it off using copious amounts of warm soapy water or a diluted 10:1 bleach solution.
- Letters from unknown sources should first be screened by security personnel. If opened, letters allegedly containing anthrax or another toxin should be handled carefully. Note if there was a puff of dust or particles from the envelope when it was opened and be sure to report that when assistance arrives. Carefully place such a letter and its envelope in a sealed plastic pouch. Thoroughly wash face and hands with warm soapy water before calling for assistance.
- If circumstances dictate, plan and prepare a chemical/biological safehaven in your residence using guidelines listed in this pamphlet.

- At the office, familiarize yourself in advance with established emergency procedures and equipment at your post. See your regional or post security officer for details.
- If in a car, shut off outside air intake vents and roll up windows if no gas has entered the vehicle. Late model cars may provide some protection from toxic agents.
- In any case of suspected exposure to chemical or biological agents, no matter what the origin, medical assistance should be sought as soon as possible, *even if no symptoms are immediately evident.*

Preparing a Safehaven

In some remote but possible scenarios (such as the incident in Bhopal, India) an entire city or neighborhood could become endangered by lethal gas. If conditions at your post make this a possibility, you may want to plan and prepare a sealed chemical/biological safehaven at your residence as follows:

Choosing a Safehaven Room

- Select an inner room on an upstairs floor with the least number of windows and doors.
- Choose a large room with access to a bathroom and preferably with a telephone.
- Avoid choosing rooms with window or wall air conditioners; they are more difficult to seal.

Sealing a Room

- Close all windows, doors, and shutters.
- Seal all cracks around window and door frames with wide tape.
- Cover windows and exterior doors with plastic sheets (6 mil minimum) and seal with pressure- sensitive adhesive tape. (This provides a second barrier should the window break or leak).
- Seal all openings in windows and doors (including keyholes) and any cracks with cotton wool or wet rags and duct tape. A water-soaked cloth should be used to seal gaps under doors.
- Shut down all window and central air and heating units.

Suggested Safehaven Equipment

- Protective equipment—biological/chemical rated gas masks, if available; waterproof clothing including long-sleeved shirts, long pants, raincoats, boots, and rubber gloves.
- Food and water—a 3-day supply.
- Emergency equipment—flashlights, battery-operated radio, extra batteries, can or bottle opener, knife and scissors, first aid kit, fire extinguisher, etc.
- Miscellaneous items—prescription medicines and eyeglasses, fan, extra blankets, passports and other important papers, television set, toys, books, and games.